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Development of evaluation standards for professional experiential training of student teachers

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Abstract

This study aims to develop evaluation standards, indicators and criteria, and an evaluation form for professional experiential training of student teachers. It examines and incorporates related concepts, theories and studies as follows: 1) professional standards and indicators for Thai teachers, 2) professional standards and indicators for international teachers, 3) 21st Century Skills, 4) concepts of formative assessment, and 5) concepts of professional learning communities. An evaluation form is then developed and validated, and according to the findings it is suggested that the evaluation standards for professional experiential training of student teachers consist of 3 standards, which are 1) teaching competency, 2) classroom action research competency, and 3) self-development for professional advancement, with a total of 32 indicators. This evaluation form is generated using 4-level rubric scores for each indicator and 8-level criteria for the evaluation. The content validity of the evaluation form is confirmed, and with the inclusion of 3 standards this evaluation form will be used by student teachers and supervisor/mentor teachers for professional experiential training.

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Keywords: evaluation Standard; professional experiential training; student teachers; 21st Century Skills; formative assessment; professional learning communities

1. Introduction

After examining documents and studies on the evaluation of professional experiential training of student teachers, the researcher found that each institution differs from one another in its use of evaluators, criteria, and

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tools. However, most of them still rely on the observation method with the 4-5 rating scale. In addition, student teachers often express negative attitude towards evaluation and refuse to accept the principle as they regard evaluation as a process merely to pinpoint their mistakes (Chamnankit, 1991; Pengsawat, 2000; Soithong, 2000; Sanghuansri, 2006; Professional experience Center, Chulalongkorn University Demonstration Secondary School, 2006; Seekhieo, 2006; Senarat, 2009; Le Cornu, 2009). Moreover, evaluators may not fully understand the concept of evaluation and place less importance on giving feedback to student teachers (Seekhieo, 2006; Senarat, 2009).

According to the principles and concepts on evaluation of student learning, it is suggested that the process of developing and implementing the formative assessment for student learning should be done by a group of instructors teaching at the same level rather than by an individual one. The process should be conducted through panel discussion or apply an assessment method developed by instructors concerned. It is proved more effective when these assessment results are shared, interpreted, and used to improve student learning as well as the assessment method used by instructors in order to attain higher learning achievement (Panich, 2012; Dufour, et al., 2010). Previous research shows that the application of formative assessment of professional teaching has been highly successful and actually improved the quality of both teachers and students (Crossouard, 2011; Helen, Eleanor & Judy, 2011; Mary, 2011; Thomas, 2011; Willis, 2011; Winnie & Theodore, 2011; Ayala et al., 2012; Watsawang, 2004; Ekwarangkoon, 2007). Therefore, instructors are required to work as a group and use the same evaluation form of which they co-develop its standards, indicators, and criteria. More important, this group process by instructors in developing continuous improvement of student learning through actual practice using a comprehensive exchange of formative assessment results will gradually change their teaching behavior and habit, and transform them from “teachers” to “coaches” without their feeling of being forced, hence forming professional learning communities along the way. Moreover, students can apply feedback from the instructors to constantly improve and develop their learning in order to attain academic achievement as specified in the learning standards (Panich, 2012; Dufour, et al., 2010). Therefore, formative assessment and professional learning communities are key principles and concepts in developing and improving the quality of professional experiential training of student teachers.

Furthermore, according to the education reform resulting from Thailand’s National Education Act of 1999, section 53, which aims to produce and develop educational personnel to meet quality standards of advanced profession (Office of the Education Council, 2002), it seeks to develop new teachers and improve the efficiency of the teaching profession by developing standard criteria of professional teacher in accordance with the 11th Education Development Plan of the Ministry of Education 2012-2016 (Office of the Permanent Secretary Ministry of Education, 2013) in order to face the challenges of the 21st century. As a result, the goal of teacher development lies in the development of student teachers to acquire the required professional standards. To fulfill this goal, a strong emphasis must be placed on establishing and developing standards and indicators for evaluating professional experiential training of student teachers.

According to the above principles and concepts and the examination of related studies, there has been no research conducted to develop the standards for assessing professional experiential training of student teachers based on the concept of 21st Century Skills, formative assessment, and professional learning communities, the fact which encourages the researcher to study the development of student teachers to advance professionally and to achieve the standards required for professional teachers in order to cope with the 21st century trend. With that said, it is necessary to develop standards, indicators and criteria for evaluating experiential training of student teachers as inputs for creating a suitable evaluation form which is objective, fair, transparent, and accountable. This evaluation is to be performed before, during, and after the professional experiential training of student teachers.

Nomenclature

- A** “**Evaluation standards for professional experiential training of student teachers**” refers to regulations on desirable characteristics and qualities of professional teaching practice, which student teachers are to follow.
- B** “**Evaluation indicators for professional experiential training of student teachers**” refers to elements which are assessed and used to indicate student teachers' achievement in professional teaching practice.
- C** “**Professional growth**” refers to student teachers' progress in professional teaching practice, which is

measured by the standards and indicators of professional experiential training of student teachers.

D “21st Century Skills” refers to student teachers' desirable characteristics and qualities of professional experiential training of student teachers, when measured by 21st Century Skills, which consist of 1) learning and innovation, 2) information, media, and technology, and 3) life and career.

E “Formative assessment” refers to guidelines for assessing student teachers, which are used by supervisor/mentor teachers who gather information on professional experiential training of student teachers in order to provide feedback necessary for the constant transformation and development of teacher students' professional teaching practice as well as the promotion of student teachers' professional growth.

F “Professional learning communities” refers to collaboration between supervisor/mentor teachers and student teachers through exchanging and sharing information on professional experiential training of student teachers, with the aim to improve and develop student teachers so that they experience professional growth.

2. Conceptual Framework

2.1. Professional standards for teachers

2.1.1 Professional standards for Thai teachers

Educational professional standards are an important tool for those holding the teaching profession. The Teachers Council and Education Personnel Act of 2003 prescribes teaching as a licensed profession which includes teachers, school administrators, educational administrators, and other educational personnel. They are required not only to work for the benefits of those receiving their services, which is regarded as a major goal of the teaching profession, but also to acquire correct knowledge and understanding necessary for maintaining teaching as an advanced and reputable profession (Secretariat Office of the Teachers Council of Thailand, 2006).

The Teachers Council and Education Personnel Act of 2003, section 49, identifies 3 areas of education professional standards with which teachers institutions in Thailand have to comply. They are 1) standards of professional knowledge and experience; 2) standards of performance; and 3) standards of characteristic (Secretariat Office of the Teachers Council of Thailand, 2006).

2.1.2 Professional standards for international teachers

Professional standards for international teachers are incorporated using 10 sources of relevant documents and studies as follows: 1) Assessment model for teaching profession (Hunter, 1982), 2) Components for evaluation of teaching professional practice (Danielson, 1996), 3) Evaluation standards and teaching career advancement (Tennessee, 2009), 4) Standards for teaching profession assessment (CCSSO, 2013), 5) Components for evaluation of student teachers' performance (Judith & Lauren, 2012), 6) Components of teaching practice model (Rebecca, Janet et al., 2010), 7) Finland teaching professional competencies (Niemi, 2011; Niemi, 2012), 8) Teacher competencies in Singapore (National Institute of Education, 2009), 9) Standards for Teacher profession in China (Wu, 2014), and 10) Components for evaluation of teacher's leaning in Hong Kong (Berry, 2014), and consist of 7 standards below:

- Instructional planning (Hunter, 1982; Danielson, 1996; Tennessee, 2009; CCSSO, 2013; Judith & Lauren, 2012; Rebecca, Janet, et al., 2010; Niemi, 2011; Niemi, 2012; Wu, 2014).
- Teaching practice for learner development (Hunter, 1982; Danielson, 1996; Tennessee, 2009; CCSSO, 2013; Judith & Lauren, 2012; Niemi, 2011; Niemi, 2012; National Institute of Education, 2009; Wu, 2014).
- Assessment of learning outcomes (Hunter, 1982; Tennessee, 2009; CCSSO, 2013; Judith & Lauren, 2012; Rebecca, Janet, et al., 2010; Niemi, 2011; Niemi, 2012; National Institute of Education, 2009; Wu, 2014; Berry, 2014).

- Learning environment (Danielson, 1996; Tennessee, 2009; Niemi, 2011; Niemi, 2012; National Institute of Education, 2009; Wu, 2014).
- Professional growth (Danielson, 1996; Tennessee, 2009; CCSSO, 2013; Judith & Lauren, 2012; Rebecca, Janet, et al., 2010; Niemi, 2011; Niemi, 2012; National Institute of Education, 2009; Wu, 2014; Berry, 2014).
- Communication (Danielson, 1996; Tennessee, 2009; Niemi, 2011; Niemi, 2012; National Institute of Education, 2009).
- Information technology (Niemi, 2011; Niemi, 2012; National Institute of Education, 2009; Wu, 2014).

2.2. *The 21st Century Skills*

In the 21st century education, the most important skill is learning skills, which equip students with knowledge and understanding necessary for confronting rapid, intense, unexpected, and unpredictable changes. The future generation as a result must possess high learning skills and be prepared to be not only knowledge workers but also learning persons, with everyone, including student teachers becoming professional teachers, involved in continuous learning from preschool to university years as well as life-long learning. Student teachers are then expected to equip themselves with learning and life skills for the 21st century, which are: 1) learning and innovation, which includes 1.1) critical thinking and problem solving, 1.2) communication and collaboration, and 1.3) creativity and innovation; 2) information, media, and technology, which includes 2.1) information literacy, 2.2) media literacy, and 2.3) ICT literacy 3) life and career; which includes 3.1) flexibility and adaptability, 3.2) initiative and self-direction, 3.3) social and cross-cultural, 3.4) productivity and accountability, and 3.5) leadership and responsibility (Panich, 2012; Trilling & Fadel, 2009).

2.3. *Formative assessment*

Formative assessment is a process conducted to examine students' learning development in order to obtain information, provide feedback for improvement, and promote learning development according to student abilities. Moreover, it involves improvement of teaching strategies, which leads to mutual learning achievement, rather than summative assessment used to determine the final results (Bennett, 2011; Sujiva, 2007; Kanjanawasee, 2007). Formative assessment is therefore considered extremely suitable for the evaluation of professional experiential training of student teachers because it will enable student teachers to demonstrate their skills and competencies which reflect the real picture in professional experiential training, their integration of knowledge, and their practice in educational institutions. Formative assessment should be based on the comparison of student teachers' behavior in each time period to measure the extent of behavioral change, which leads to professional growth, and it includes 5 key strategies as follows: 1) identifying the goal of learning and participation in determining learning achievement criteria (Wiliam & Thompson, 2007 cited in Wiliam, 2007; ETS, 2010 cited in Bennett, 2011); 2) conducting effective classroom discussions, inquiries and activities which are evidence of student teachers' learning (Wiliam & Thompson, 2007 cited in Wiliam, 2007; ETS, 2010 cited in Bennett, 2011; Sujiwa, 2007); 3) providing feedback to student teachers to promote learning progress (Black & Wiliam, 1998; Wiliam & Thompson, 2007 cited in Wiliam, 2007; ETS, 2010 cited in Bennett, 2011; Thomas et al, 2011; Sujiwa, 2007); 4) stimulating student teachers to possess ownership of learning (self-assessment such as self-learning activity); and 5) stimulating student teachers to gain additional knowledge from other learning sources (assessment by others such as student teacher's activity assessed by other individuals) (Wiliam & Thompson, 2007 cited in Wiliam, 2007; ETS, 2010 cited in Bennett, 2011).

2.4. *Professional learning communities (PLC)*

To improve professional experiential training and to help student teachers advance professionally, constant collaboration is required among supervisor teachers, mentor teachers, and student teachers through periodic formative assessment of student teachers' performance during their training. Those concerned are responsible for

gathering and sharing useful information on professional experiential training of student teachers, which will lead to the improvement and development of student teachers so that they can enjoy professional growth. In other words, such constant collaboration means establishing professional learning communities.

Professional learning communities are therefore the gathering of individuals who among them have common goals, hold meetings, work, exchange and share information, and assess progress to constantly create, improve, and develop learning, the processes which will lead to goal achievement. The key elements of professional learning communities obtained from relevant documents and studies include: 1) Impetus (Priestleya, Millera, Barrettb, & Wallacec, 2011) 2) Gradual 3) Flexibility 4) Choice 5) Accountability (Wiliam, 2006 cited in Wiliam, 2007) 6) Leadership (Priestleya, Millera, Barrettb, & Wallacec, 2011; Moss, 2012) 7) Collaboration & dialogue (Priestleya, Millera, Barrettb, & Wallacec, 2011) 8) Support (Wiliam, 2006 cited in Wiliam, 2007), and 9) Professional development (Priestleya, Millera, Barrettb, & Wallacec, 2011). It should be noted that for professional learning communities to occur, formative assessment with corresponding collaboration and implementation is required.

3. Purpose

- To develop standards and indicators for professional experiential training of student teachers.
- To develop an evaluation form based on the developed standards and indicators for professional experiential training of student teachers.
- To determine assessment criteria based on the developed standards and indicators for professional experiential training of student teachers.

4. Methods

This research applies a qualitative research approach through the collection of data from relevant documents and studies, and the data are then analyzed by content analysis. The procedure is divided into 2 phases as follows:

Phase 1: Development of standards and indicators for professional experiential training of student teachers, which includes:

- Investigating the concepts, theories, documents and studies related to standards and indicators for professional experiential training of student teachers, which are divided into 5 categories as follows:
 - Professional standards and indicators for Thai teachers from 5 sources, which are: 1) Teachers Council of Thailand (2013); 2) Chulalongkorn University (Faculty of Education, 2013); 3) Srinakharinwirot University (Faculty of Education, 2013); 4) Silpakorn University (Faculty of Education, 2013); and 5) Kasetsart University (Faculty of Education, 2013).
 - Professional standards and indicators for international teachers from 10 sources (as stated in 2.1.2 on professional standards for international teachers).
 - 21st Century Skills (as stated in 2.2).
 - Concepts of formative assessment (as stated in 2.3).
 - Concepts of professional learning communities (as stated in 2.4).
- Analyzing and synthesizing the concepts and theories, documents and studies related to the 5 categories of standards and indicators for professional experiential training of student teachers aforementioned, with the application of content analysis to obtain standards and indicators for professional experiential training of student teachers, as shown in Figure 1:

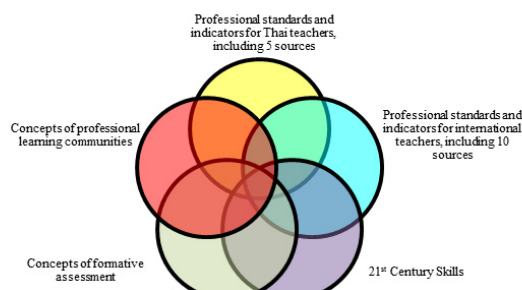


Figure 1: 5 categories of standards and indicators for professional experiential training of student teachers.

- Submitting the standards and indicators developed to be reviewed and verified for content accuracy and validity by 6 experts in teaching professional standards, measurement and evaluation, and supervision of professional experiential training.

Phase 2: Development of an evaluation form and criteria for professional experiential training of student teachers, which consists of the following:

- Conducting an evaluation form based on the developed standards and indicators, which includes:
 - Investigating relevant documents and studies on existing evaluation forms for professional experiential training of student teachers to generate the guidelines and framework for producing the tool, and according to the findings, the tool suitable for this assessment is rubric score.
 - Defining the terms and explanation of performance levels of the rubric score assessment.
- Determining evaluation criteria through the examination of relevant documents and studies on professional experiential training of student teachers.
- Submitting the evaluation form and criteria to be reviewed and verified for content accuracy and validity by the experts mentioned.

5. Findings

Following the development of evaluation standards, indicators, criteria and form for professional experiential training of student teachers, it is found that:

- The standards for evaluation of professional experiential training of student teachers comprise of 3 standards and 32 indicators as stated below:

Standard 1: Teaching competency, consisting of 3 sub-standards and 24 indicators as follows:

Sub-standard 1: Preparation of instructional management plans, which consists of 7 indicators: 1) having knowledge of the curriculum, 2) determining objectives, 3) specifying learning contents, 4) specifying learning activities 5) specifying materials and learning sources, 6) determining measurement and assessment methods, and 7) preparing instructional management plans.

Sub-standard 2: Learning management, comprising 3 indicators and 15 sub-indicators: 1) learning activity management, which includes 1.1) introduction, 1.2) instruction, 1.3) communication with learners, 1.4) promotion of thinking skills, 1.5) knowledge exchange and sharing, 1.6) learning enhancement 1.7) class management, and 1.8) conclusion; 2) use of materials and learning sources; 3) measurement and assessment of student performance, consisting of 3.1) assessment through diverse approaches, 3.2) assessment with informed learning goals, 3.3) simultaneous assessment conducted during instruction, 3.4) evaluation promoting self-assessment on learning, 3.5) assessment to develop continuous learning, and 3.6) report on learning assessment results.

Sub-standard 3: Measurement and assessment of teaching practice for student development, comprising 2 indicators, which are: 1) application of assessment results, and 2) report on reflection and performance.

Standard 2: Classroom action research competency, consisting of 2 indicators as follows: 1) conducting research to improve instructional management, and 2) conducting research to improve research skills.

Standard 3: Self-management for professional development, consisting of 6 indicators which are: 1) teacher personality trait, 2) self-learning, 3) receptiveness and adaptability to changing situations, 4) responsibility for other tasks in educational institutions, 5) communication and collaboration, and 6) creation of professional learning communities.

- The tool, which is the evaluation form for professional experiential training of student teachers, consists of 32 items, each of which using 4 levels of rubric score and 8 levels of assessment criteria, namely A, B+, B, C+, C, D+, D, and F. These evaluation form and criteria have already been verified for content validity.

6. Discussions

Professional experiential training of student teachers is the application of teacher training knowledge in educational institutions, and to transform student teachers into quality teachers through professional experiential training, it requires certain standards to regulate the quality of such training. The analysis and synthesis of related concepts and theories, documents and studies from 5 major areas, which include: 1) Professional standards and indicators for Thai teachers, 2) Professional standards and indicators for international teachers, 3) 21st Century Skills, 4) Concepts of formative assessment, and 5) Concepts of professional learning communities, provide comprehensive assessment standards and indicators. These standards and indicators also meet and are in line with the requirements specified in the National Education Act of 1999, the Education Development Plan of the Ministry of Education. In addition, they correspond to global challenges of the 21st century while reflecting the picture of putting knowledge into practice for mutual achievement of both students and teachers.

The evaluation of professional experiential training of student teachers is considered to be an assessment of a learning situation as it happens, so the evaluation form needs to incorporate items which mainly reflect performance. As a result, the developed evaluation form, which uses standards and criteria with 4 levels of rubric score for each indicator as well as the explanation of levels of performance for each assessed item, is objective and clear in scoring student teacher performance. Furthermore, professional experiential training of student teachers is a course offered by the Faculty of Education, the evaluation form is required to contain 8 levels of criteria for performance consideration used to demonstrate the level of quality in professional experiential training through 1 year of training.

Therefore, the evaluation standards, indicators, criteria developed have contribution and will be beneficial for supervisor/mentor teachers as well as student teachers in providing them with a framework and guidelines for developing quality professional experiential training.

7. Conclusions

The evaluation standards and indicators for professional experiential training consist of 3 standards and 32 indicators. In addition, for the assessment of each indicator, the evaluation form uses 4 levels of rubric score, which can be applied by student teachers and supervisor/mentor teachers in conducting professional experiential training.

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References

- Ayala, C. C. et al. (2012). From Formal Embedded Assessment to Reflective Lessons: The Development of Formative Assessment Studies. *Applied Measurement in Education*, 21(4), 315-334.
- Bennett, R.E. (2011). Formative assessment: a critical review. *Assessment in Education: Principles, Policy & Practice*, 18(1), 5-25.
- Berry, R. (2014). Assessment for Learning in Hong Kong School. Conceptions, Issues and Implications. In C. Marsh & C.K.Li (Eds.) *Asia's High Performing Education Systems* (pp.255-273). New York: Routledge.
- Chamnankit, B. (1991). The development of causal relationship model between variables concerning professional experiences and teaching competencies of student teachers colleges (Unpublished doctoral's thesis). Chulalongkorn University, Bangkok, Thailand.
- Council of Chief State School Officers. (2013). *InTASC : Model Core Teaching Standards and Learning Progressions for Teacher 1.0*. http://www.ccsso.org/Documents/2013/2013_INTASC_Learning_Progressions_for_Teachers.pdf.

- Crossouard, B. (2011). Using formative assessment to support complex learning in conditions of social adversity. *Assessment in Education: Principles, Policy & Practice*, 18(1), 59-72.
- Danielson, C. (1996). Enhancing professional practice, a framework for teaching. <http://www.andrews.edu/~rjo/Artifacts/Danielson%27s%20Framework%20for%20Professional%20Practice%20web.pdf>.
- Dufour, R., and Dufour, R. (2010). The Role of Professional Learning Communities in Advancing 21st Century Skill. In Bellanca, J. and Brandt, R. (Eds.), *21st Century Skills: Rethinking How Student Learn* (pp. 77-96). Solution Tree: United States of America.
- Ekwarangkoon, P. (2007). Research and development of the measurement and assessment system for integrated learning in primary schools (Unpublished doctoral's thesis). Chulalongkorn University, Bangkok, Thailand.
- Faculty of Education. (2013). Guide of professional experiential training. Kasetsart University, Bangkok, Thailand.
- Faculty of Education. (2013). Guide of professional experiential training. Silpakorn University, Nakhonpathom, Thailand.
- Faculty of Education. (2013). Guide of professional experiential training in schools: Bachelor of Education courses (Revised 2552). Chulalongkorn University, Bangkok, Thailand.
- Faculty of Education. (2013). Guide of teaching practice and professional experiential training. Srinakharinwirot University, Bangkok, Thailand.
- Helen R. Dixon, Eleanor Hawe, and Judy Parr. (2011). Enacting Assessment for Learning: the beliefs practice nexus. *Assessment in Education: Principles, Policy & Practice*, 18(4), 365-379.
- Hunter, M. (1982). Mastery teaching. <http://www.csun.edu/coe/eed/holle/PACT/planning/Lesson%20Planning.pdf>.
- Judith, H. S. and Lauren, M. S. (2012). Predicting Performance: A Comparison of University Supervisors' Predictions and Teacher Candidates' Scores on a Teaching Performance Assessment. *Journal of Teacher Education*, 63(1), 39-50.
- Kanjanawasee, S. (2007). The policy of learning assessment according to The National Education Act. In Wongwanich, S. (ed.), *New learning assessment*. (2nd ed.) (pp. 3-24). Bangkok: Chulalongkorn University Publisher.
- Le Cornu, R. (2009). "Building resilience in pre-service teachers." *Teaching and Teacher Education*, 25(5): 717-723.
- Mary F. Hill. (2011). 'Getting traction': enablers and barriers to implementing Assessment for Learning in secondary schools. *Assessment in Education: Principles, Policy & Practice*, 18(4), 347-364.
- Moss, J. (2012). Teachers learning in community: realms and possibilities. *Teaching Education*, 23(1), 111-113.
- Niemi, H. (2011). Educating student teachers to become high quality professionals : A Finnish case.
- Niemi, H. (2012). Relationship of Teachers' Professional Competences, Active Learning and Research Studies in Teacher Education in Finland.
- National Institute of Education. (2009). *A Teacher Education Model for the 21st Century : A Report by the National Institute of Education*, Singapore.
- Office of the Education Council. (2002). Education act B.E. 2542. Bangkok, Thailand.
- Office of the Permanent Secretary, Ministry of Education. (2013). Education Development Plan of the Ministry of Education No. 11 B.E. 2555 - 2559. Bangkok, Thailand.
- Panich, V. (2012). *Way of learning for students in the 21st century*. (3rd ed.). Bangkok, Thailand.
- Pengsawas, W. (2000). Study Report on some factors related to the education of professional experiential training. Sakonnakon Rajabhat University, Sakonnakon, Thailand.
- Priestley, M., Millera, K., Barrett, L. and Wallace, C. (2011). Teacher learning communities and educational change in Scotland: the Highland experience. *British Educational Research Journal*, 37(2), 265-284.
- Professional Experience Center of Chulalongkorn University Demonstration Secondary School. (2006). SATIT CHULA: Teacher professional learning source. (1st ed.). Bangkok, Thailand.
- Rebecca, R. S., Janet, L. T., et al. (2010). Improving Preservice Teacher Preparation Through the Teacher Work Sample: Exploring Assessment and Analysis of Student Learning. *Action in Teacher Education*, 32(1), 39-53.
- Sanghuansri, W. (2006). Elements that influence to anxiety in the professional experiences of the 3 year students of Faculty of Education, Rajabhat Rajanagarindra University, Chachoengsao (Unpublished master's thesis). Rajabhat Rajanagarindra University, Chachoengsao, Thailand.
- Secretariat Office of the Teachers Council of Thailand. (2006). *Guide of Education Practice*. Bangkok, Thailand.
- Seekhieo, D. (2006). The development of a system to evaluate practice teaching students based on 360 degree feedback by applying generalizability theory (Unpublished doctoral's thesis). Chulalongkorn University, Bangkok, Thailand.
- Senarat, S. (2009). Problems of the evaluation (Unpublished doctoral's thesis). Mahasarakham University, Mahasarakham, Thailand.
- Soithong, S. (2000). Relationships among knowledge of Thai language of student teachers in Rajabhat Institutes, Bangkok metropolis (Unpublished master's thesis). Chulalongkorn University, Bangkok, Thailand.
- Sujiva, S. (2007). Principles of Learning Assessment. In Wongwanich, S. (ed.), *New learning assessment*. (2nd ed.) (pp. 52-64). Bangkok: Chulalongkorn University Publisher.
- Tennessee State Board Education. (2009). Framework for Evaluation & Professional Growth : Comprehensive Assessment. http://tennessee.gov/education/frameval/doc/comprehensive_assessment.pdf.
- Thomas L. et. al. (2011). Elementary teachers' formative evaluation practices in an era of curricular reform in Quebec, Canada. *Assessment in Education: Principles, Policy & Practice*, 18(4), 381-398.
- Trilling, B. and Fadel, C. (2009). *21st Century Skills: Learning for life in our times*. Jossey-Bass: United States of America.
- Watsawang, P. (2004). Practical guidelines for the measurement and evaluation of learning outcome in vocational and technology for prathom suksa four (Unpublished master's thesis). Chulalongkorn University, Bangkok, Thailand.

- Wiliam, D. (2007). Content Then Process: Teacher Learning Communities in the Service of Formative Assessment. In Reeves, D. (Eds.), *Ahead of the curve: The Power of Assessment to Transform Teaching and Learning* (pp. 183-204). Solution Tree: United States of America.
- Wiliam, D. (2007). Keeping Learning on Track: Formative Assessment and the Regulation of Learning. In Frank, K. and Lester, Jr. (Eds.), *Second Handbook of Mathematics Teaching and Learning* (pp. 53–98). Greenwich, Conn.: Information Age Publishing.
- Wiliam, D., and Thompson, M. (2007). Integrating Assessment with Instruction: What Will It Take to Make It Work?" In Carol, A.D., and Mahwah, N.J. (Eds.), *The Future of Assessment: Shaping Teaching and Learning*. Lawrence Erlbaum Associates.
- Willis J. (2011). Affiliation, autonomy and Assessment for Learning. *Assessment in Education: Principles, Policy & Practice*, 18(4), 399–415.
- Winnie and Theodore. (2011). Influence of teachers' perceptions of teaching and learning on the implementation of Assessment for Learning in inquiry study. *Assessment in Education: Principles, Policy & Practice*, 18(4), 417-432.
- Wu, N. (2014). The Implementation of the National Professional Standard for K-12 Teachers, 2012 (NPST) at Regional and Local Level in China: A Case Study of Regional Teacher Professional Development Standards Implementation in Qingyang District, Chengdu, China. *Higher Education of Social Science*, 7(3), 1-11. Available from: URL: <http://www.cscanada.net/index.php/hess/article/view/5759> DOI: <http://dx.doi.org/10.3968/5759>